

REMARKS

This submission is made in response to the Office Action mailed July 18, 2007, and is accompanied by a petition to revive (as this application was unintentionally abandoned). The Office Action allowed claims 16 and 17, but rejected the remaining claims. In response, Applicant submits the foregoing amendments and the following remarks.

Claims 1-15, 22, and 26 are canceled. Claim 18 has been amended to depend from claim 16. Claim 19 has been amended to depend from claim 17. Claims 23 and 27 have been amended to depend from claim 19. Claims 24 and 25 have been amended to improve clarity. Applicant does not intend to further limit these claims with these amendments. Claim 34 has been amended by adding "processing the first and second signals based on a two-channel spectrum modification technique to suppress the undesired component in the first signal" and "suppressing the undesired component in the first signal based on a single-channel spectrum modification technique". Support for the amendment may be found in claim 16.

Claim 36 is newly added. Support for the new claim is found in claim 17. Claims 37-47 are newly added. Support for the new claims may be found in original claims 2-9 and 13-15, respectively. After entry of the foregoing amendments, claims 16-21, 23-25, and 27-47 remain in this application, wherein claims 29-33 and 35 are withdrawn from consideration.

Discussion of Rejections - 35 U.S.C. 103(a)

Claims 1-5, 8-11, 13-15, 18-20, 22, 28, and 34 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Janse (US 5,610,991) in view of Widrow et al. (Adaptive Noise Cancelling: Principles and Applications, Proc. IEEE, December 1975). The rejections of claims 1-5, 8-11, and 13-15 are rendered moot by the cancellation of those claims. Claims 18-20, 22, and 28 now depend from allowed claim 16.

As to claim 34, claim 34 recites:

34. A method for suppressing noise in an automobile, comprising:
detecting via a first signal detector a first signal comprised of a desired component plus an undesired component;
detecting via a second signal detector a second signal comprised mostly of an undesired component;
processing the first and second signals based on a two-channel spectrum modification technique to suppress the undesired component in the first signal; and
suppressing the undesired component in the first signal based on a single-channel spectrum modification technique.

(*Emphasis added*). Claim 34 patently defines over the cited art for at least the reasons that the cited art fails to disclose the features emphasized above.

In forming the rejection, the Office Action cited col. 5, lines 1-19 of Janse as teaching the claimed features. In contrast to the claimed features, Janse (col. 5, lines 13-19) teaches: "The present invention is based upon the insight that uncorrelated noise cancels out when determining the combined cross power spectrum, whereas correlated noise does not. Thus, by determining the correlated noise and by applying spectral subtraction, the correlated noise is cancelled too. With the present invention, an improvement of 6-7 dB over Zelinski is achieved." Specifically, Janse only discloses uncorrelated and correlated noise cancellation. However, Janse does not teach,

disclose or suggest processing the first and second signals based on a two-channel spectrum modification technique to suppress the undesired component in the first signal; and suppressing the undesired component in the first signal based on a single-channel spectrum modification technique.

For this reason alone, claim 34 is patentable over the cited arts, and the rejection of claim 34 should be withdrawn.

New claims

The new claim 36 recites, in part, "processing the first and second signals based on a two-channel spectrum modification technique to suppress the undesired component in the first signal; and suppressing residual undesired component in the first signal". Applicant believes that it is clear that the limitation is not taught by the cited reference.

New claims 37-47 recite the limitations recited in original claims 2-9 and 13-15, respectively. Applicant believes that it is clear that the limitations are not taught by the cited reference.

Allowable Subject Matter

Claims 16 and 17 are allowed. Insofar as claims 18 and 37-47 depend from claim 16 and its related claims, these claims are also allowable. Insofar as claims 19-21, 23-25, and 27-28 depend from claim 17 and its related claims, these claims are also allowable.

Conclusion

In view of the foregoing, it is believed that all pending claims are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

No fee is believed to be due in connection with this amendment and response to Office Action. If, however, any fee is believed to be due, you are hereby authorized to charge any such fee to deposit account No. 20-0778.

Respectfully submitted,

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